

DEPARTMENT OF TRANSPORTATION**DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 69.28**WELDING INSPECTION REPORT****Resident Engineer:**Pursell, Gary**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-000422**Date Inspected:** 09-Sep-2007**Project Name:** SAS Superstructure**OSM Arrival Time:** 2330**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 800**Contractor:** Zhenhua Port Machinery Company, Ltd (ZPMC), Changxing Island **Location:** Shanghai, China

CWI Name:	Xu Liang Zhang & Li Yan Hua			CWI Present:	Yes	No
Inspected CWI report:	Yes	No	N/A	Rod Oven in Use:	Yes	No N/A
Electrode to specification:	Yes	No	N/A	Weld Procedures Followed:	Yes	No N/A
Qualified Welders:	Yes	No	N/A	Verified Joint Fit-up:	Yes	No N/A
Approved Drawings:	Yes	No	N/A	Approved WPS:	Yes	No N/A
				Delayed / Cancelled:	Yes	No N/A

Bridge No: 34-0006**Component:** Mock-UP**Summary of Items Observed:**

Caltrans Quality Assurance (QA) Inspector, Mike Hasler was present to observe the fitup, welding and related activities associated with the fabricating of Caltrans Mock-up, 77m, 89m and 114m, for the San Francisco Oakland Bay Self Anchored Suspension Bridge, at Zhenhua Port Machinery Company (ZPMC) facility on Changxing Island.

Item	Description	WBS	Dwg No.	Status
1	Skin Plate E (114m)	NA	NA	Work In Progress
	Mock-Up 114m, Skin Plate E (upper section): Caltrans QA Inspector observed submerged arc welding (SAW) in progress at plate splice weld, piecemark, mp1023-1 to MA109-1. The welder operator is observed welding a complete joint penetration (CJP) fill pass weld in the flat position. The welder is identified as Mr. Han Chang Hou, welder stamp 059464. The welder is using welding procedure specification WPS-B-T-2321-B-P3-S, Revision 0. Caltrans QA measured current welding parameters at approximately 660 amps, 32 volts and travel speed, 600 millimeters per minute (mm/min). Preheat and interpass temperatures were verified during welding activities. Preheat and interpass temperatures were verified during welding activities. Preheat temperature prior to the start of welding measures more than 110 degrees Celsius (230 degree Fahrenheit) but less than 232 degrees Celsius (450 degrees Fahrenheit) during maximum interpass temperature verification. SAW consumables were verified and identified as JW-3, classification EM12K, diameter 4.8 mm (.189 inches) electrode and, JF-B Flux, classification F7A2.			
2	Mock-up 89m, Diaphragm Plate	NA	NA	Work In Progress
	Mock-Up 89m, Diaphragm Plate SA13 to P1236-1 (top section): Caltrans QA Inspector observed ZPMC shop worker perform air carbon arc backgouging at plate splice weld, side 2. ZPMC QA inspector, Fu Yu hong stated that the material prep of the weld joint would take up the remainder of the work-shift.			

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3	Mock-Up 114m, Skin Plate B	NA	NA	ZPMC MT
	Caltrans QA Inspector witnessed ZPMC QC perform, nondestructive testing (NDT), Magnetic Particle Test (MT) and Visual Test (VT) on the following: 1) Mock-Up 114.00, Skin Plate C (upper section) splice plate weld mp1019-1 to MA112, cover pass, 100% MT coverage, weld 1 outside side mp1021-1 to MA112, cover pass, 100% MT coverage, weld 3 outside side 2) Mock-Up 114.00, Skin Plate E (upper section) splice plated weld mp1023-1 to MA109, root pass, 100% MT coverage, weld 5 inside side mp1023-1 to MA109, root pass, 100% MT coverage, weld 6 outside side 3) Mock-Up 114.00, Skin Plate B, (top section), stiffener plate to skin plate mp1006-2 to MA101-1, root pass, 100% MT coverage, weld 3 mp1006-2 to MA101-1, root pass, 100% MT coverage, weld 4 mp1009-2 to MA101-1, root pass, 100% MT coverage, weld 6 mp1009-2 to MA101-1, root pass, 100% MT coverage, weld 7 The ZPMC, QC, NDT technician is identified as, Mr. Zhou Dong Yun. The test appeared to be in general conformance with AWS D1.5 2002 requirements.			
4	Mock-Up 114m, Skin Plate B	NA	NA	Caltrans MT
	The Caltrans QA Inspector performed VT and MT examinations on the following: 1) Mock-Up 114.00, Skin Plate C (upper section) splice plate weld mp1019-1 to MA112, cover pass, 50% MT coverage, weld 1 outside side mp1021-1 to MA112, cover pass, 50% MT coverage, weld 3 outside side 2) Mock-Up 114.00, Skin Plate E (upper section) splice plated weld mp1023-1 to MA109, root pass, 100% MT coverage, weld 5 inside side mp1023-1 to MA109, root pass, 100% MT coverage, weld 6 outside side 3) Mock-Up 114.00, Skin Plate B, (top section), stiffener plate to skin plate mp1006-2 to MA101-1, root pass, 100% MT coverage, weld 3 mp1006-2 to MA101-1, root pass, 100% MT coverage, weld 4 mp1009-2 to MA101-1, root pass, 100% MT coverage, weld 6 mp1009-2 to MA101-1, root pass, 100% MT coverage, weld 7 See Caltrans Magnetic Particle Test Report, TL6028, generated on this date for additional information			

Summary of Conversations:

As identified within the contents of this report.

Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Mazen Wahbeh, (818) 292-0659, who represents the Office of Structural Materials for your project.

Inspected By:	Hasler,Mike	Quality Assurance Inspector
Reviewed By:	Cuellar,Robert	QA Reviewer
